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THE EFFECTS OF PARTICIPATION AND GOAL DIFFICULTY ON PERFORMANCE--ETC(U)
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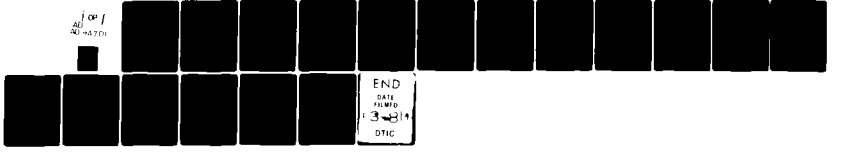

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Previous research comparing the effects of assigned versus participatively set goals on performance were essentially tests of the null hypothesis in that goal difficulty level was not systematically manipulated. The present laboratory study investigated the effects of assigned versus participatively set goals, and the effects of varying goal difficulty level on an arithmetic task. Eighty-six college students were assigned to either a participative goal condition or one of three assigned goal conditions. In two of the

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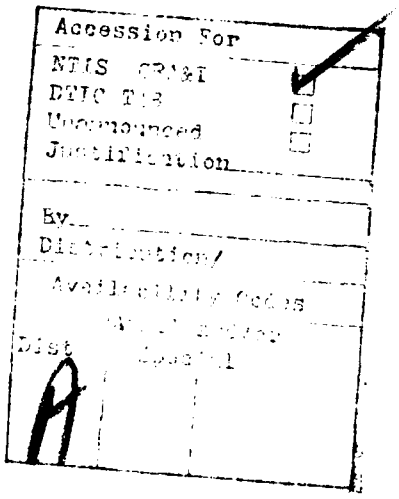

# THE EFFECTS OF PARTICIPATION AND GOAL DIFFICULTY ON PERFORMANCE

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# THE EFFECTS OF PARTICIPATION AND GOAL DIFFICULTY ON PERFORMANCE

## Abstract

Previous research comparing the effects of assigned versus participatively set goals on performance were essentially tests of the null hypothesis in that goal difficulty level was not systematically manipulated. The present laboratory study investigated the effects of assigned versus participatively set goals, and the effects of varying goal difficulty level on an arithmetic task. Eighty-six college students were assigned to either a participative goal condition or one of three assigned goal conditions. In two of the assigned goal conditions participants were assigned goals equal to those set in the participative condition, the difference being that individuals in one group were assigned goals at random and those in the other group were assigned goals on the basis of their premeasure scores. Participants in the third assigned goal condition were randomly assigned a goal in the top quartile of the goals set participatively. As hypothesized, individuals with hard assigned goals had higher performance than peers with lower goals set in a participative manner. Contrary to modern organizational theory, individuals with participatively set goals did not have higher performance than those with assigned goals of equal difficulty. Personality traits were not found to moderate the effects of goal setting on performance.

# THE EFFECTS OF PARTICIPATION AND GOAL DIFFICULTY ON PERFORMANCE

Participation is said to be a variable of primary importance in its own right by most modern organizational theorists for increasing the value of an organization's human resources (e.g., Argyris, 1955; Bennis, 1966; Likert, 1967). This is because participation is said to affect a person's cognitive, affective and behavioral responses by increasing (1) understanding of, (2) satisfaction with, and (3) effort to perform task requirements.

Empirical evidence in support of each of these three assertions can be found in the goal setting literature (e.g., Latham & Saari, 1979b; Arvey, Dewhirst & Boling, 1976; Latham & Kinne, 1974; respectively). However, goal setting theory (Locke, 1968), which is an outgrowth of classical organizational theory (e.g., Taylor, 1911; Locke, Note 1), downplays the importance of participation. Locke (1968) suggested that participation may be effective only to the extent that it affects a person's goals. Goals in and of themselves can clarify (cognition) task requirements for an individual, inject challenge and meaning (affect) into a task, and increase effort and persistence (behavior); to the degree that other factors also (e.g., authoritarianism, delegation) lead to the setting of and commitment to specific hard goals (e.g., demand characteristics), participation is irrelevant (Locke & Schweiger, 1978). Empirical evidence in support of Locke's statement regarding participation can be found in the goal setting literature.

For example, in a field study involving engineers/scientists, Latham, Mitchell & Dossett (1978) concluded that participation was important only to the extent that it leads to the setting of higher goals than is the case where supervisors assign them unilaterally. This conclusion was based on the finding that (a) goal acceptance was the same in the assigned and participative goal setting conditions, (b) only individuals who participated in setting their goals had higher performance than peers who were either in the feedback/do best condition or the control group, and (c) individuals in the participative condition set significantly higher goals that those who were assigned goals.

The importance of participation in relation to goal setting was tested subsequently in two laboratory and three field experiments. The experimental design in each study involved at least three goal conditions: (1) a generalized goal condition where individuals were urged to do their best, (2) a goal specificity condition where the supervisor/experimenter and the employee/subject together agreed upon a specific goal, and (3) a goal specificity condition where each individual was assigned a goal that was agreed upon by the authority figure and an employee/subject in the second condition. Thus, goal difficulty was held constant between the participative and assigned goal specificity conditions.

The results were essentially the same in four of the five studies. In the first study, Latham and Saari (1979a) found that college students who were assigned goals performed as well on a brainstorming task as individuals who participated in setting their goals. Moreover, goal attainment was exactly the same in the two conditions. Seventeen out of twenty people in each condition met or exceeded their goal.

In two field studies involving clerical personnel taking a selection test and/or receiving a performance appraisal (Dossett, Latham & Mitchell, 1979) there was no significant difference in the performance of those with assigned versus participatively set goals. On the selection test, however, goal attainment was higher in the assigned condition than it was in the participative condition, even though there was no difference in overall performance. Furthermore, in the first performance appraisal session, goal acceptance was significantly higher and performance was marginally higher in the assigned condition than it was in the participative condition. No significant differences on these measures emerged in the two subsequent appraisal periods conducted three and six months later. The authors concluded that participation in goal setting has no greater effect on performance, goal attainment, or goal acceptance than assigned goals when goal difficulty is held constant.

In a fourth study (Latham & Marshall, 1980), a government agency desired to define effective supervisory behavior. Seventy-six government employees participated in the job analysis. The employees were randomly assigned to one of three goal setting conditions: self-set, participatively set, or assigned goals. The task required each individual to brainstorm individually job behaviors that had been seen to make the difference between effective and ineffective job behavior as a supervisor. Goals were set in terms of the number of behaviors to be listed within 20 minutes. There was no significant difference in goal difficulty between those with participatively set goals and those with self-set goals. Goal difficulty was held constant between the participative and assigned goal conditions by imposing a goal agreed upon by an employee in the participative condition upon an employee in the assigned

condition. There was no significant difference among the three goal setting conditions regarding goal acceptance or actual performance. This was true regardless of employee age, education, position level, years as a supervisor, or time employed in the public sector.

In the fifth study in this series, Latham and Saari (1979b) tested the hypothesis that assigned goals are effective only when a supervisor exhibits a supportive managerial style. The principle of supportive relationships with employees, like participation, is a key variable in most modern organizational theories for increasing human resource effectiveness (e.g., Likert, 1961, 1967). A supportive managerial style was defined in that study by behaviors such as assuring the subject that he/she can fulfill the task requirements, encouraging the person to ask questions, and asking rather than telling the person to do things. The results of the study were inconclusive because although the experimenter in the supportive condition was rated by the subjects as significantly more supportive than the same experimenter in the nonsupportive condition, individuals in both conditions perceived that the experimenter was behaving in a supportive manner. Contrary to the previous studies, participation in goal setting resulted in higher performance than was the case where the goals were assigned, even though goal difficulty was held constant between the two goal setting conditions. The authors suggested that participation in goal setting might have been more effective than assigned goals because it resulted in subjects asking performance-related questions which increased their understanding of what was required of them.

A limitation of the experimental design used in each of the five studies reviewed here is that comparisons between assigned and participatively set

goals were essentially a test of the null hypothesis. That is, goal difficulty was held constant between participative and assigned goal setting conditions rather than being systematically manipulated. The purpose of the study described below was to replicate the findings of the five previous studies with an experimental design where the difficulty level of assigned goals was manipulated rather than only being held equal. A secondary purpose was to correct a potential flaw in the design of the two laboratory studies by Latham and Saari (1979a,b) and the field study by Latham and Marshall (1980).

In those three studies, goals were assigned to individuals in the A= condition regardless of their ability. Thus some people in the A= condition may have received a goal that was above or below their ability to attain. This procedure was not a problem in the second field study by Dossett et al. (1979). In that study each employee was matched with a person of similar ability on a performance appraisal premeasure score before being randomly assigned to a participative or an assigned goal condition. In the Latham and Saari studies it was not practical to collect premeasures on college students, match them on ability, randomly assign them to conditions, and then request them to return at a later date to perform the task. Similarly, it was difficult in the Latham and Marshall study (1980) to collect premeasures from government employees in a non-research setting.

The hypotheses of the present study were that individuals with hard assigned goals would have higher performance than peers with lower goals which were set in a participatory manner, and that with goal difficulty held constant, individuals with participatively set goals would have higher performance than peers with assigned goals. The first hypothesis is based on Locke's (1968)

theory of goal setting. The second hypothesis is based on modern organizational theory (Likert, 1967).

## Method

### Subjects

Eighty-six college students (52 female, 34 male) participated in this study. Half were randomly assigned to either participative goal setting (P) where the subject and the experimenter agreed upon a specific goal to work toward attaining, or to assigned equal (A=) where each subject was randomly assigned a goal that was set by a subject in P. The other half were randomly placed in assigned matched equal (AM=) where each subject was matched on ability with a person in P and then was assigned that person's goal, or to assigned hard (A↑) where subjects were assigned a goal selected at random from those that fell in the top quartile of the goals set in the participative condition. The subjects were drawn from the same subject pool at the University of Washington.

### Personality Variables

Individual differences in personality variables were measured to determine if they acted as moderators of the goal setting condition-performance relationship. The personality variables of interest in this study were: (1) need for achievement, (2) need for independence, (3) self-esteem, and (4) locus of control. The tests used to measure these personality variables were the same as those used in previous studies, and have been described in detail elsewhere (Latham & Yukl, 1976).

Task Description

The task required each individual to average the ratings on seven 7-point Likert type items (e.g., 5 + 4 + 1 + 3 + 2 + 5 + 4 = 3.43) for each of 10 performance criteria. The criteria were in the form of behavioral observation scales (BOS; Latham & Wexley, 1981). To provide the task with a sense of importance, each person was told that a local company had employed the authors to evaluate the company's performance appraisal system for first-line supervisors in terms of rating errors. It was stressed that this was not an experiment per se because scoring accuracy was critical not only for checking rating errors but for ensuring that a supervisor's personnel record was not adversely affected for compensation/promotion decisions.

In reality, the names of the supervisors were fictitious. The item ratings had been made by the authors so that task difficulty was held constant across the appraisal forms.

After calculating a mean rating to two decimal places for each supervisor on each criterion, the subject was required to give a letter grade (A - E) to the supervisor. The grade was based on a predetermined raw score range that had been provided for each grader (e.g., 5.65 = B). The performance measure in this study was the number of performance appraisal grades listed by each subject.

Procedure

Each subject worked alone in an office setting. A clock was provided so that the person could keep track of time.

Prior to the experimental manipulations, each person was given five minutes to work on a subset of the experimental task. Each individual was given

the instruction to do "as many calculations as possible" within the five minute time period. The stated purpose of this premeasure was to determine the aptitude/ability of people to perform this task accurately. The actual purpose was to collect premeasure scores.

After obtaining the premeasure, and discussing it with the subject, the experimenter requested each person in the participative condition to set a specific, difficult, but attainable goal in terms of the number of grades that could be calculated within 20 minutes. If the goal was extremely high or extremely low relative to the premeasure, the experimenter reemphasized that the goal should be difficult but attainable, and asked the person whether the goal specified truly met that criterion. Prior to beginning the task, the individual was asked to repeat the goal that was to be met within the 20 minute time period.

In the three assigned goal conditions (A=, A$^{M}$=, and A$^{H}$), the procedure was identical in that the person was to verbalize the goal that was to be attained within 20 minutes. However, the individual had no discussion with the experimenter as to what constituted a difficult goal. The goal was assigned by the experimenter. The subjects, like those in the participative condition, were simply told that people with specific hard goals get results.

At the end of the 20 minute time period each person completed a questionnaire containing the following 5-point Likert-type items:

(a) How much influence did you personally have over the goal (number of grades) that was set?

(b) Compared to the experimenter, how much influence did you have over the goal (number of grades) that was set?

(c) How difficult was it for you to attain the goal that you worked toward attaining?

(d) Forgetting the goal that was set, how difficult was the task itself?

(e) How much satisfaction did you experience from working toward the goal?

(f) How committed were you to attaining the goal?

(g) How important was goal attainment to your feeling of achievement and accomplishment?

To overcome the problem in previous goal setting studies of confounding goal difficulty level with an individual's ability, as well as that of testing the null hypothesis by only holding goal difficulty constant between the assigned and participative goal conditions, we randomly assigned people to either an A↑ or the AM= condition after subjects had been run in the P and A= conditions. These people were from the same subject pool as those who were randomly assigned to the P and A= conditions. As noted earlier, the people in the A↑ condition received a goal from the top quartile of goals set by individuals in the participative condition without regard to premeasure scores. The people in the AM= condition were matched with a person in the P condition on the basis of a premeasure, and were then assigned that person's goal. If there were no significant differences in performance among P, A=, and AM=, and the A↑ group had the highest performance, we believed that it could be concluded safely that the flaw in the design of the previous studies was not a serious one.

## Results

Participation. Individuals in the participative condition reported more influence in setting their goals ($\bar{X} = 8.86$, $SD = 1.42$) than did individuals in

the A= ($\bar{X}$ = 4.45, SD = 2.86), AM= ($\bar{X}$ = 4.05, SD = 2.75) or the A↑ ($\bar{X}$ = 4.00, SD = 2.47) conditions (t = 5.991, p < .01; t = 6.54, p < .01; t = 6.45, p < .01, respectively). An analysis of variance revealed no significant differences among the three assigned goal setting conditions. Cronbach's alpha for the two five-point goal influence questions was .92.

Goal difficulty. There was no significant difference between the participative and the A= or AM= conditions on perceptions of goal difficulty. However, there were significant differences between those in the A↑ conditions ($\bar{X}$ = 3.50, SD = 1.10) versus those in the P ($\bar{X}$ = 2.64, SD = 1.22; t = 2.22, p < .05), A= ($\bar{X}$ = 2.73, SD = 1.55; t = 1.99, p < .05), and AM= ($\bar{X}$ = 2.45, SD = 1.10; t = 2.69, p < .05) conditions. These results correspond with the actual mean goal difficulty levels in the three conditions: A↑ ($\bar{X}$ = 54.80, SD = 4.14), P ($\bar{X}$ = 43.45, SD = 12.14), A= ($\bar{X}$ = 43.45, SD = 12.14), and AM= ($\bar{X}$ = 43.45, SD = 12.14).

Task difficulty. An analysis of variance revealed no significant differences among the four conditions regarding perceptions of task difficulty.

Goal acceptance. There was no significant difference among conditions regarding goal acceptance. The number of people who did not accept their goal in the P, A=, AM=, and A↑ conditions was 3, 5, 2, and 4, respectively. These people were deleted from the analysis on performance because they had a score of 8 or less as a summed response to the three 5-point questions on acceptance (Cronbach's alpha = .84).

Performance. A test for homogeneity of regression coefficients revealed no significant difference among the four conditions. Thus, an analysis of covariance was conducted using the premeasure as a covariate. The F was not significant. The adjusted mean performance levels for A↑, AM=, A=, and P were

53.40, 47.48, 46.43, and 46.85, respectively. Since a priori comparisons between participative and assigned goal setting were formulated prior to, and apart from, inspection of the data, three planned t-tests were conducted. No significant difference was found between participative goal setting and the AM= or the A= conditions. However, performance in the A↑ condition was significantly higher than performance in P ($t = 2.16$, $df = 67$, $p < .05$).

Moderator Variables. The subjects were split at the median with regard to their scores on the personality tests. No main or interaction effects were obtained.

## Discussion

The findings of this study replicate the major conclusions of previous research on participation and goal difficulty. That is, when goal difficulty is held constant, participation does not increase performance above that attained with assigned goals. In addition, the finding that performance was highest in the A↑ condition supports a major hypothesis of goal setting theory, namely that the higher the goal the higher the performance providing that the goal is accepted.

It is possible that subjects in the A↑ condition were somehow different from those in the P or A= conditions. However, this argument loses credence if one looks at the finding of no significant differences between A= and AM=. Both A= and AM= performed significantly worse than A↑.

That there was no significant difference in performance among the P, A=, and AM= conditions provides further support for the hypothesis that participation in goal setting is important only to the extent that it leads to the

setting of higher goals than is the case where the supervisor assigns them unilaterally. This is true regardless of the person's self esteem, belief in internal or external control, or needs for achievement and independence. This would appear to be a rather robust finding when viewed in conjunction with the five previous studies in this area.

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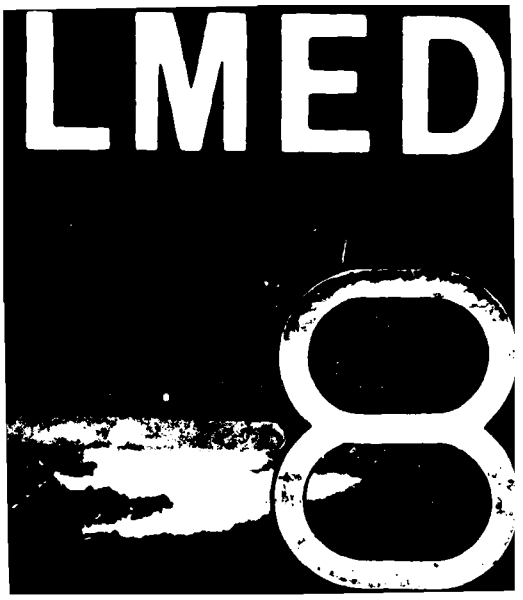
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